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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,864

07/03/2008

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73478

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23872 7590 01/26/2011  
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EXAMINER

PERKEY, WILLIAM B

ART UNIT

PAPER NUMBER

2862

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,864	<b>Applicant(s)</b> ZAKEL ET AL.	
	<b>Examiner</b> W.B. Perkey	<b>Art Unit</b> 2862	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4 and 10-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 10-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 5,060,063).

Freeman shows an optical system as the video probe illustrated in Fig. 9 for observing multiple objects 102 and 104. A camera unit is shown as element 112. A first prism unit is shown as element 118, situated on the optical axis of the camera unit 112 and producing two output partial beam paths. Two object prism units are shown as elements 124 and 126. Illumination units 134 and 132 are assigned to each of the two object prisms 124 and 126. Thus, claim 1 is shown by Freeman except for the illumination units being implemented as light-emitting semiconductor components. Dependent claim 4 further specifies that the illumination units are light-emitting diodes. Freeman does not disclose the nature of the light emitting element which is transmitted by the fiber optics 128 and 130. Semiconductor light emitting diodes were widely conventional at the time of applicant's invention for illuminating objects. One of skill in the illumination field of endeavors was cognizant that semiconductor light emitting diodes have certain advantages over other conventional light emitting devices such as fluorescent tubes and incandescent bulbs; such as requiring less power, having greater efficiency and smaller in size. It would have been within the purview of the ordinary workman in the art to use conventional semiconductor light

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emitting diodes for generating the illumination of the video probe in Fig. 9 of Freeman in order to obtain low power, high efficiency illumination and minimizing space requirements. Thus, claim 1 does not patentably distinguish over Freeman. Concerning claim 10, the output beam paths of object prism units 124 and 126 run transversely to the optical axis of the camera unit 112, and said output beam paths are in opposite directions with respect to each other.

Concerning claim 11, the output beam paths at exit of the fiber optics 128 and 130 run parallel to the optical axis of the camera unit 112. Concerning claim 12, the first prism unit 118 clearly functions as set forth in applicant's claim.

3. Claims 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Freeman (US 5,060,063) in view of Douglas (US 5,943,089).

Freeman shows an optical system as the video probe illustrated in Fig. 9 for observing first object 104 having a terminal surface and a second object 102 having a terminal surface. The first and second objects are spaced apart, as seen in Fig. 9. A camera unit is shown as element 112. A camera beam splitting prism is shown as element 118, situated on the optical axis of the camera unit 112 and producing two output partial beam paths, one of which is directed upward and the other downward, as seen in Fig. 9. Two object prism units are shown as elements 124 and 126. Illumination units 134 and 132 are assigned to each of the two object prisms 124 and 126. Thus, Freeman shows the limitations of claims 13 and 18, except for the illumination units being first and second light emitting diode elements arranged opposite the first and second object prism units, respectively. Instead, Freeman shows the output of first and second optical fibers opposite the first and second object prisms. Douglas shows a multiple object viewing device similar the Freeman's Fig. 9 optical system. In fact, Douglas shows Freeman's Fig. 9 device as

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prior art in Fig. 1. Douglas in describing his optical system in Fig. 3 discloses that the illumination sources 232 and 234 are in the video probe 200 are implemented in a preferred embodiment using fiber optic light sources like that of prior art Fig. 1 and thus like in Fig. 9 of Freeman (column 4 lines 18-30). However, Douglas goes on to suggest that other light sources capable of providing directional light may be used, as understood by those skilled in the art. One of skill in the art would readily understand from this passage of Douglas, that other directional light sources could be used for the fiber optic light sources in Fig. 9 of Freeman. Thus, the prior art as a whole would have suggested to one of ordinary skill in the art to provide conventional semiconductor light emitting diodes in the cavities 132 and 134 of the Freeman Fig. 9 device opposite the first and second object prisms 126 and 124 and eliminating the optical fibers in order to reduce the number of parts, reduce power requirements, increasing illuminating efficiency, and reducing the size of the probe.

#### **Response to Arguments**

4. Applicant's arguments filed December 20, 2010 have been fully considered but they are not persuasive. Applicant argues that Freeman does not appreciate the problem that applicant solves; namely that Freeman is not focused on providing a compact optics system that can be used in a space that is limited between two substrates. Applicant adds that by using light-emitting semiconductor components applicant's invention provides a more compact device than Freeman because only electrical connections are required rather than optical fibers. This line of reasoning is not persuasive with respect to the rejection as stated in paragraph 2 above, because that rejection did not involve the elimination of the fiber optics. Whereas, new claims 13-22 provide the new limitation that the first and second light emitting diodes are arranged opposite

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the first and second object prism units. This limitation was handled in the rejection in paragraph 3 above by providing light emitting diodes in the cavities 132 and 134 in Fig. 9 of Freeman and thus eliminating the fiber optics, relying on the suggestion found in column 4 lines 18-30 as well as noting that the ordinary workman in the illuminating fields of endeavor would have been cognizant of the inherent advantages of conventional light emitting diodes versus conventional fluorescent tubes or incandescent bulbs.

### **Conclusion**

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William B. Perkey whose telephone number is (571) 272-2126. The examiner can normally be reached on Monday-Friday 9:15am-5:45pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Clayton E. LaBalle can be reached at 571-272-1594. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this office action should be faxed to (571) 273-8300 or mailed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Hand - delivered responses should be brought to:

Customer Service Window  
Randolph Building  
401 Dulany Street

/William B. Perkey/  
Primary Examiner  
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